



## PATENT ABSTRACTS OF JAPAN

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SATOKAWA SHIGEO****(54) OPERATING METHOD OF GHP SYSTEM WITH  
SILVER SUPPORT ALUMINA CATALYST FOR  
DENITRATION AND DEODORIZATION****(57) Abstract:**

**PROBLEM TO BE SOLVED:** To enable an operation for preventing reduction of purifying performance of a silver support alumina catalyst by disposing a silver support alumina catalyst for denitration and deodorization in an exhaust gas line of a gas engine with gas engine and a heat pump system, and operating the gas engine with always lean condition combustion.

**SOLUTION:** A compression refrigerator (a heat pump) is driven by a gas engine 1, and combustion exhaust gas generated in this time is discharged from a leading pipe 4 after heat-recovering with a radiator 6, a waste heat recovery apparatus 7, a cooler 8 for the gas engine, and a heat exchanger 3 in a closing circuit which consists of a pump P for circulating a heat medium. In the heat pump circuit, the heat medium discharged from compressors 9, 10 is led to an indoor equipment to generate hot wind. The heat medium is circulated through an expansion valve 12 and an outdoor heat exchanger 14. In this case, a silver support alumina catalyst

for denitration and deodorization is disposed in an exhaust gas line of the gas engine 1, the gas engine 1 is driven with always lean condition combustion so as to make harmless NO<sub>x</sub> and the like in exhaust gas.

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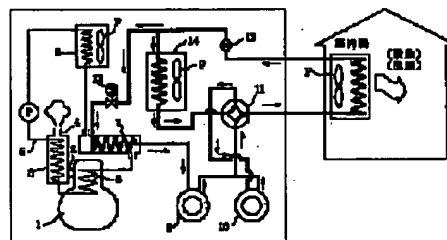


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